

## **ABSTRACT OF THE DISCLOSURE**

There is disclosed an infrared detection apparatus (130) for detecting an adverse atmospheric condition comprising a plurality of filters corresponding to different ones of a plurality of wavelengths and at least including filters that enable the adverse atmospheric condition to be detected, an infrared array (9), said infrared array producing signals representative of infrared radiation reaching said array from a field of view, radiation control means (47) for controlling the infrared radiation received by the infrared array, the radiation control means including means (7) for changing the filters so that said infrared array (9) can produce wavelength signals representative of infrared radiation from each of said wavelengths corresponding to the adverse atmospheric condition to be detected, and means (4) for enabling said infrared array to produce calibration signals for each wavelength signal, calibration means (140) for performing a calibration of each wavelength signal to correct for radiation from the infrared detection apparatus on the basis of at least the corresponding calibration signal to thereby produce a calibrated wavelength signal representative of radiation from the field of view, and output means (140) for producing an output indicative of the presence of the adverse atmospheric condition in the field of view based on the calibrated wavelength signals.